

PATENT  
ATTORNEY DOCKET NO.: REGEN1250-7

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Wachter and Remington Art Unit: Unassigned  
Parent Serial No.: 09/575,847 Examiner: Unassigned  
Parent Filing Date: May 19, 2000  
Serial No.: Unassigned  
Filed: July 14, 2003  
Title: LONG WAVELENGTH ENGINEERED FLUORESCENT PROTEINS

**Mail Stop PATENT APPLICATION**

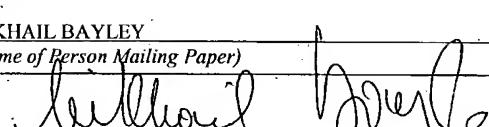
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with 37 § CFR 1.97, Applicants bring to the Examiner's attention the related parent patent application, U.S. Serial No. 09/575,847, filed May 19, 2000, which is relied upon for an earlier filing date under 35 USC § 121. For the convenience of the Examiner, copies of the PTO Forms 1449 are enclosed.

It is respectfully requested that these references be considered in the examination of this application and their consideration be made of written record in the application file.

CERTIFICATION UNDER 37 CFR §1.10 "EXPRESS MAIL" Mailing Label Number: <u>EV 318 738 041 US</u> Date of Deposit: <u>July 14, 2003</u>	
I hereby certify that this correspondence is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" with sufficient postage on the date indicated above and is addressed to: Mail Stop PATENT APPLICATION, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.	
<u>MIKHAIL BAYLEY</u> (Name of Person Mailing Paper)	
(Signature)  July 14, 2003 (Date)	

In re Application of:  
Wachter and Remington  
Application No.: Unassigned  
Filed: July 14, 2003  
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PATENT  
Attorney Docket No.: REGEN1250-5

No fee is deemed necessary in connection with the filing of this Information Disclosure Statement, because it is being filed prior to the receipt of a first office action on the merits of the above-captioned application. However, if any fee is required, authorization is hereby given to charge any fees associated with the filings submitted herewith, or credit any overpayment to Deposit Account No. 50-1355. A duplicate copy of this sheet is enclosed.

Respectfully submitted,



Lisa A. Haile, J.D., Ph.D.  
Registration No.: 38,347  
Telephone: (858) 677-1456  
Facsimile: (858) 677-1465

**USPTO CUSTOMER NUMBER 28213**  
GRAY CARY WARE & FREIDENRICH LLP  
4365 Executive Drive, Suite 1100  
San Diego, CA 92121-2133

FORM PTO-1449  
U.S. Department of Commerce Patent and  
Trademark Office

Docket No.  
REGENTS1250-5

Serial No.:  
09/575,847

INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT

Applicant(s):  
Wachter et al.

Filing Date:  
May 19, 2000

Group Art Unit:  
1652

U.S. PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE

FOREIGN PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATIO N (YES/NO)

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)

AA	Elstiger, Marc-Andre et al., "Structural and Spectral Response of Green Fluorescent Protein Variants to Changes in pH+", <i>Biochemistry</i> , Vol. 38, Pages 5296-5301, (1999)
AB	Jayaraman, Sujatha et al., "Mechanism and Cellular Applications of a Green Fluorescent Protein-based Halide Sensor," <i>J. Biol. Chem.</i> , 2000 275(9) 6047-6050
AC	Wachter, Rebekka M. et al., "Structural Basis of Spectral Shifts In the Yellow-emission Variants of Green Fluorescent Protein," <i>Structure</i> , Vol. 6, No. 10, Pages 1267-1277 (1998)

→ References are of record.

EXAMINER		DATE CONSIDERED
		10/31/02

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form 1449

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693243-160317

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office	Docket No. REGENTS1250-5	Serial No.: 09/575,847
Applicant(s): Wachter et al.		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date: May 19, 2000	Group Art Unit: 1652

	AD	Wachter, Rebekka M. et al. "Crystal Structure and Photodynamic Behavior of the Blue Emission Variant Y66H/Y145F of Green Fluorescent Protein," <i>Biochemistry</i> , Vol. 36, Pages 9759-9765, (1997) <i>Reference of record</i>
NC	AE	Wachter, Rebekka M. et al., "Sensitivity of the Yellow Variant of Green Fluorescent Protein to Halides and Nitrate," <i>Current Biology</i> , Vol. 10, No. 17, Pages R628-R629, (1999).

EXAMINER <i>Nasheed</i>	DATE CONSIDERED <i>10/31/02</i>
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Form 1449

<b>FORM PTO-1449</b> U.S. Department of Commerce Patent and Trademark Office	Docket No. REGENTS1250-5	Serial No.: 09/575,847
	Applicant(s): Wachter et al.	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>P.E.</i>	Filing Date: May 19, 2000	Group Art Unit: 1652

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## **U.S. PATENT DOCUMENTS**

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## FOREIGN PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATIO N (YES/NO)

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)**

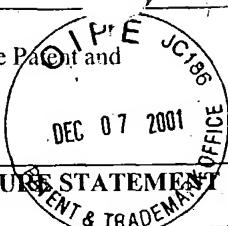
<i>ME</i>	AA	Elsliger, Marc-Andre et al., "Structural and Spectral Response of Green Fluorescent Protein Variants to Changes in pH," <i>Biochemistry</i> , Vol. 38, Pages 5296-5301, (1999)
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Docket No.  
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	AE	Wachter, Rebekka M. et al., "Sensitivity of the Yellow Variant of Green Fluorescent Protein to Halides and Nitrate," <i>Current Biology</i> , Vol. 19, No. 17, Pages R628-R629,	
		<i>In complete citation. No date for the reference</i>	

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11/11/02

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*Applicant's Copy*

PTO-1449 8-83)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. REGEN1250-5	SERIAL NO. 09/575,847
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT: WACHTER and REMINGTON	
		FILING DATE: May 19, 2000	GROUP: 1633

## U.S. PATENT DOCUMENTS

AMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
NC	P1 5,491,084	02/13/96	Chalfie et al.	435	189	
NE	P2 5,625,048	04/29/97	Tsien et al.	536	23.4	
NE	P3 5,777,079	07/07/98	Tsien et al.	530	350	
NE	P4 5,795,737	08/18/98	Seed et al.	435	69.1	
NC	P5 5,804,387	09/08/98	Connock et al.	435	6	

## FOREIGN PATENT DOCUMENTS

AMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO
NE	F1 WO 91/01305	02/07/91	PCT				
	F2 WO 95/07463	03/16/95	PCT				
	F3 WO 95/21191	08/10/95	PCT				
	F4 WO 96/23810	08/08/96	PCT				
	F5 WO 96/23898	08/08/96	PCT				
	F6 WO 96/27027	09/06/96	PCT				
	F7 WO 96/27675	09/12/96	PCT				
✓	F8 WO 97/11094	03/27/97	PCT				
NE	F9 WO 97/26333	01/17/97	PCT				

AMINER No sheet DATE CONSIDERED 9/28/01

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11 PTO-1449 V. 8-83)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. REGEN1250-5	SERIAL NO. 09/575,847
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NE	F10	WO 97/28261	08/07/97	PCT				
NE	F11	WO 97/42320	05/07/97	PCT				

## OTHER PUBLICATIONS (including Author, Title, Date, Pertinent Pages, Etc.)

NE	D1	Baldwin et al. Biochemistry 29 5509-5915 (1990)
	D2	Chalne et al. Science 263 802-804 (1994)
	D3	Cheng et al Nature Biotechnology 14 606-609 (1996)
	D4	Cody et al Biochemistry 32 1212-1218 (1993)
	D5	Compack, et al., Gene 173 33-38 (1996)
	D6	Chomoraj et al Proc. Natl. Acad. Sci. 93 8362-8367 (1996)
	D7	Cramer et al. Nature Biotech. 14 315-319 (1996)
	D8	Cubitt et al., Trends in Biochem. Sci. 20:488-455 (1995)
	D9	Delagrange et al. Bio/Technology 13 151-154 (1995)
	D10	Dickson et al., Science 274 966-969 (1996)
	D11	Ehrig et al. FEBS Letters 367 163-166 (1995)
	D12	Giuliano et al. Ann. Rev. Biophys. Biomol. Struct 24 405-435 (1995)
	D13	Heim et al. Proc. Natl. Acad. Sci. 91 12501-12505 (1994)
	D14	Heim et al Nature 373 663-664 (1995)
✓	D15	Heim et al., Current Biology 6:178-182 (February 1996)
NE	D16	Inouye and Tsuji FEBS Lett 341 277-280 (1994)

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DATE CONSIDERED

9/28/01

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PTO-1449 (8-83)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. REGENI250-5	SERIAL NO. 09/575,847
		APPLICANT: WACHTER and REMINGTON	
		FILING DATE: May 19, 2000	GROUP: 1633

<i>NC</i>	D17 Kain et al, BioTechniques 19:650-655 (1995)
	D18 Levine et al. Comp. Biochem. Physiol. 72B 77-85 (1982)
	D19 Mijwa et al Gene 173 13-17 (1996)
	D20 Muhrad et al Yeast 8 79-82 (1992)
	D21 Norris et al Plant Molecular Biology 24 673-677 (1994)
	D22 Niwa, et al. Proc. Natl. Acad. Sci. 93 13617-13622 (1996)
	D23 Ormo et al. Science 273 1392-1395 (1996)
	D24 Palmer et al. Nature Struct. Biol. 4 361-365 (1997)
	D25 Perozzo et al J. Biol. Chem. 263 7713-7716 (1988)
	D26 Prasher et al. Gene 111 229-233 (1992)
	D27 Roth Thesis from the graduate program in Biochemistry from Rutgers , the state University of New Jersey (October 1985)
	D28 Ward in Bioluminescence and Chemiluminescence (eds DeLuca et al., 235-242 (Academic Press, NY, 1981)
	D29 Ward et al Biochemistry 21 4535-4540 (1982)
	D30 Ward et al Photochem Photobiol. 35 803-808 (1982)
	D31 Yang et al. Nature Biotechnology 14 1246-1251
	D32 Yokoe and Meyer Nature Biotech 14 1252-1256 (1996)
<i>W</i>	D33 Zolotukhin et al., 70 4646-4654 (1996)
<i>NC</i>	D34 S. Delagrange and D. Youvan, "Searching sequence space to engineer proteins: exponential ensemble mutagenesis," Bio Technology, 11:1548-1552 (December, 1993).

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